

Parent Case
Affirmed

PATENT
P54596

X. APPENDIX I

CLAIMS UNDER APPEAL (1-8, 10-18)

1 1. (Thrice Amended) A hard disk drive, comprising:
2 a disk assembly, comprising:
3 a body;
4 a spindle motor supported by said body;
5 a first connector attached to said body;
6 a first printed circuit board attached to said body and connected to said
7 spindle motor; and
8 a plurality of contacts mounted on said first printed circuit board;
9 a second printed circuit board, comprising:
10 a second connector engageable with said first connector of said disk
11 assembly while said second printed circuit board is attached to said disk assembly;
12 and
13 a third connector having a plurality of terminals attached to said second
14 printed circuit board, said plurality of terminals of said third connector of said
15 second printed circuit board automatically electrically engaging said contacts on
16 said disk assembly to transfer signals between said second printed circuit board and

17 said spindle motor when said second connector of said second printed circuit board
18 is engaged with said first connector of said disk assembly.

1 2. (Twice Amended) The hard disk drive of claim 1, further comprised of
2 said plurality of terminals of said third connector being formed of an elastic
3 material.

1 3. (Twice Amended) The hard disk drive of claim 2, further comprised
2 of said first printed circuit board attached to said disk assembly being flexible.

1 4. (Twice Amended) The hard disk drive of claim 3, each one of said
2 plurality of terminals of said third connector being P-shaped.

1 5. (Twice Amended) The hard disk drive of claim 3, each one of said
2 plurality of terminals of said third connector being C-shaped.

1 6. (Twice Amended) A hard disk drive, comprising:
2 a disk assembly, comprising:

3 a body;
4 a spindle motor disposed on said body;
5 a first connector attached to said body;
6 a first printed circuit board disposed on said body and electrically connected
7 to said spindle motor; and
8 a plurality of contacts mounted on said first printed circuit board; and
9 a second printed circuit board comprising;
10 a base;
11 a second connector attached to said base; and
12 a plurality of terminals attached to said base and protruding to automatically
13 abuttingly contact said contacts on said disk assembly while said first connector is
14 engaged with said second connector.

1 7. (Amended) The hard disk drive of claim 6, further comprised of said
2 terminals being formed of a flexible material.

1 8. (Twice Amended) The hard disk drive of claim 7, wherein said first
2 printed circuit board is a flexible printed circuit board, said first printed circuit

3 board being attached to said disk assembly.

1 10. (Amended) The hard disk drive of claim 7, further comprised of said
2 terminals being P-shaped.

1 11. (Amended) The hard disk drive of claim 7, further comprised of said
2 terminals being C-shaped.

1 12. (Amended) A hard disk drive, comprising:
2 a disk assembly, comprising:
3 a body;
4 a spindle motor disposed on said body;
5 a first connector attached to said body;
6 a flexible printed circuit board disposed on said body and electrically
7 connected to said spindle motor; and
8 a plurality of contacts mounted on said printed circuit board; and
9 a printed circuit board assembly comprising;
10 a base;

11 a second connector attached to said base; and

12 a plurality of elastic terminals attached to said base and protruding to
13 automatically abuttingly contact said contacts on said disk assembly while said first
14 connector is engaged with said second connector.

1 13. The hard drive of claim 12, further comprised of said terminals being
2 C-shaped.

1 14. The hard drive of claim 12, further comprised of said terminals being
2 P-shaped.

1 15. The hard disk drive of claim 12, further comprised of said terminals
2 being hook shaped.

1 16. The hard disk drive of claim 12, further comprised of said terminals
2 being V-shaped.

1 17. The hard disk drive of claim 12, further comprised of said first

2 connector and said second connector each being a 14 pin type of connector.

1 18. The hard disk drive of claim 12, further comprised of said contacts
2 and said terminals each being a 4 pin type of connector.

X. APPENDIX II

CLAIMS UNDER APPEAL (1-8, 10-18)

1. (Four times Amended) A hard disk drive, comprising:

a head/disk assembly, comprising:

a body; and

a spindle motor supported by said body;

a first connector attached to said body;

a first printed circuit board attached to said body and connected to said spindle motor, [; and] a plurality of contacts mounted on said first printed circuit board;

a second printed circuit board, comprising[:] a second connector engageable with said first connector of said disk assembly while said second printed circuit board is attached to said disk assembly; and

a third connector having a plurality of terminals attached to said second printed circuit board, said plurality of terminals of said third connector of said second printed circuit board automatically electrically engaging said contacts on said disk assembly to transfer signals between said second printed circuit board and

16 said spindle motor when said second connector of said second printed circuit board
17 is engaged with said first connector of said disk assembly.

1 2. (Twice Amended) The hard disk drive of claim 1, further comprised of
2 said plurality of terminals of said third connector being formed of an elastic
3 material.

1 3. (Twice Amended) The hard disk drive of claim 2, further comprised
2 of said first printed circuit board attached to said disk assembly being flexible.

1 4. (Twice Amended) The hard disk drive of claim 3, each one of said
2 plurality of terminals of said third connector being P-shaped.

1 5. (Twice Amended) The hard disk drive of claim 3, each one of said
2 plurality of terminals of said third connector being C-shaped.

1 6. (Thrice Amended) A hard disk drive, comprising:
2 a head/disk assembly, comprising:

3 a body; and
4 a spindle motor disposed on said body;
5 a first connector attached to said body;
6 a first printed circuit board disposed on said body and electrically connected
7 to said spindle motor, [; and] a plurality of contacts mounted on said first printed
8 circuit board; and
9 a second printed circuit board comprising;
10 a base;
11 a second connector attached to said base; and
12 a plurality of terminals attached to said base and protruding to automatically
13 abuttingly contact said contacts on said disk assembly while said first connector is
14 engaged with said second connector.

1 7. (Amended) The hard disk drive of claim 6, further comprised of said
2 terminals being formed of a flexible material.

1 8. (Twice Amended) The hard disk drive of claim 7, wherein said first
2 printed circuit board is a flexible printed circuit board, said first printed circuit

3 board being attached to said disk assembly.

1 10. (Amended) The hard disk drive of claim 7, further comprised of said
2 terminals being P-shaped.

1 11. (Amended) The hard disk drive of claim 7, further comprised of said
2 terminals being C-shaped.

1 12. (Twice Amended) A hard disk drive, comprising:
2 a head/disk assembly, comprising:
3 a body; and
4 a spindle motor disposed on said body;
5 a first connector attached to said body;
6 a flexible printed circuit board disposed on said body and electrically
7 connected to said spindle motor, [; and] a plurality of contacts mounted on said
8 printed circuit board; and
9 a printed circuit board assembly comprising;
10 a base;

11 a second connector attached to said base; and

12 a plurality of elastic terminals attached to said base and protruding to
13 automatically abuttingly contact said contacts on said disk assembly while said first
14 connector is engaged with said second connector.

1 13. The hard drive of claim 12, further comprised of said terminals being
2 C-shaped.

1 14. The hard drive of claim 12, further comprised of said terminals being
2 P-shaped.

1 15. The hard disk drive of claim 12, further comprised of said terminals
2 being hook shaped.

1 16. The hard disk drive of claim 12, further comprised of said terminals
2 being V-shaped.

1 17. The hard disk drive of claim 12, further comprised of said first

2 connector and said second connector each being a 14 pin type of connector.

1 18. The hard disk drive of claim 12, further comprised of said contacts
2 and said terminals each being a 4 pin type of connector.